

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

17: Was anything in the session confusing? If yes, please explain.

a lot of new information - will continue to follow up on my own.

18: What improvements could be made in the format or content of this session?

It was great. Very helpful.

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)
Tropical Depression



- NWM FIM
- This map shows the predicted inundation area from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

• Transparency has been allowed to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CatFIM near Hershey (Hummelstown area)
Tropical Depression



- CatFIM
- If Swatara Creek reaches 14 ft (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA
Tropical Depression



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

I think they are good - wish they were easier to find.

12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

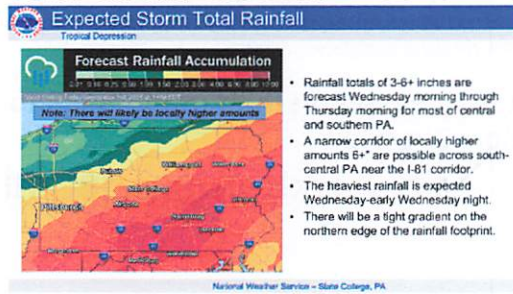
Knowing where to find them.

13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

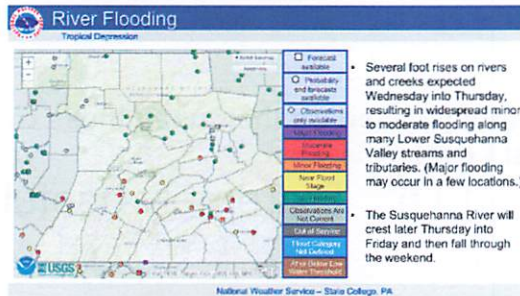
4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful



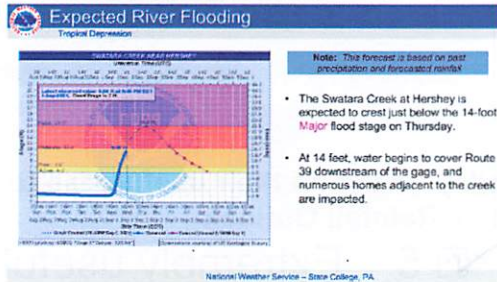
5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful



6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

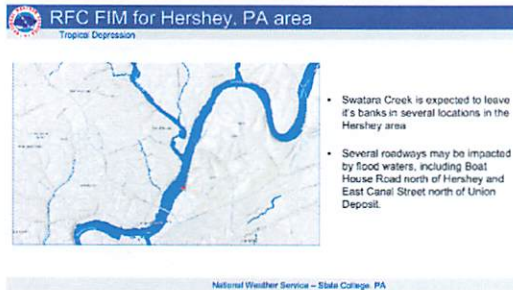
Not at all useful 1 2 3 4 5 Extremely useful



very good

7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful




Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

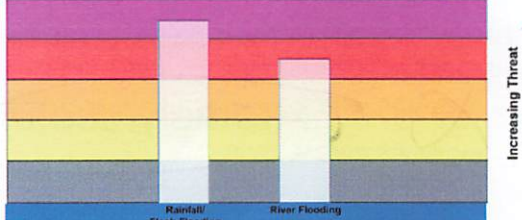
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific hazards in this area, please go to the [National Weather Service website](#).




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

Present to Fire Chief Assn & Boro Intergov Assn.

17: Was anything in the session confusing? If yes, please explain.

No

18: What improvements could be made in the format or content of this session?

Handout with web address

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)
Tropical Depression



- NWM FIM
- This map shows the predicted inundation area from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

• Transparency has been allowed to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CatFIM near Hershey (Hummelstown area)
Tropical Depression



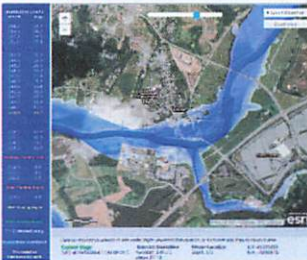
- CatFIM
- If Swatara Creek reaches 14 ft. (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA
Tropical Depression



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

Use the same color palette across agencies

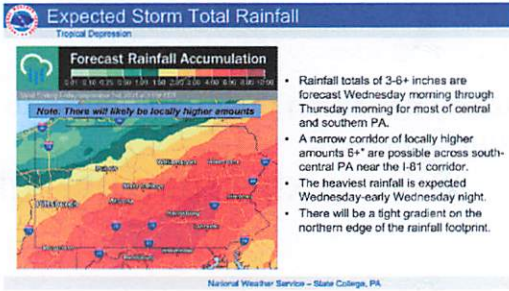
12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

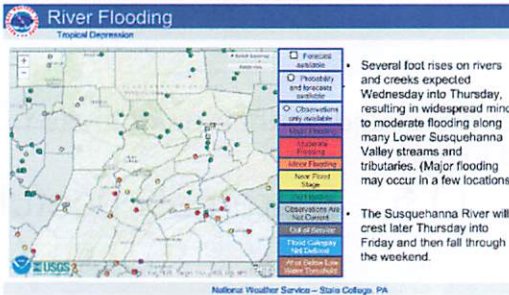
4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful



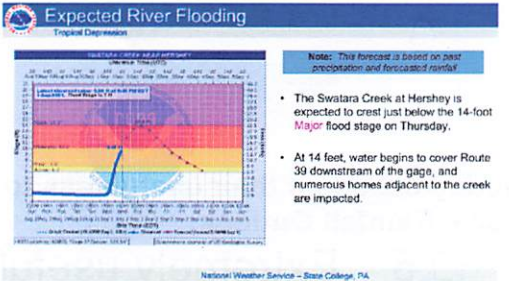
5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful



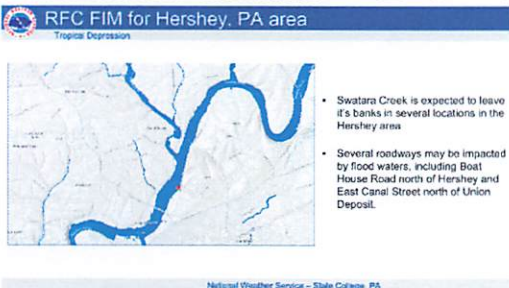
6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

Not at all useful 1 2 3 4 5 Extremely useful



7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful




Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

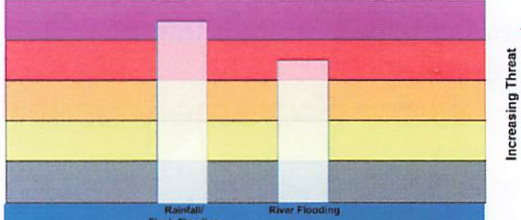
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific hazards at this area, please go to <http://www.weather.gov/dpb/haz>




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

list of websites or FB pages that provide info

17: Was anything in the session confusing? If yes, please explain.

no everything was well presented

18: What improvements could be made in the format or content of this session?

I think it was great as is

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)
Tropical Depression



- NWM FIM
- This map shows the predicted inundation areas from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

• Transparency has been altered to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CalFIM near Hershey (Hummelstown area)
Tropical Depression



- CalFIM
- If Swatara Creek reaches 14 ft. (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA
Tropical Depression



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

Clarity of affected roadways locally

12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

finding information and navigating complex webpages


13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful

Expected Storm Total Rainfall
Tropical Depression



Forecast Rainfall Accumulation
Note: There will likely be locally higher amounts.


- Rainfall totals of 3-6+ inches are forecast Wednesday morning through Thursday morning for most of central and southern PA.
- A narrow corridor of locally higher amounts 6+ are possible across south-central PA near the I-81 corridor.
- The heaviest rainfall is expected Wednesday-early Wednesday night.
- There will be a light gradient on the northern edge of the rainfall footprint.

National Weather Service - State College, PA

5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful

River Flooding
Tropical Depression



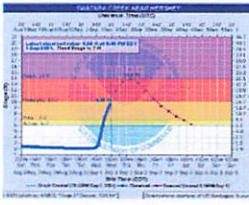
- Several foot rises on rivers and creeks expected Wednesday into Thursday, resulting in widespread minor to moderate flooding along many Lower Susquehanna Valley streams and tributaries. (Major flooding may occur in a few locations.)
- The Susquehanna River will crest later Thursday into Friday and then fall through the weekend.

National Weather Service - State College, PA

6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

Not at all useful 1 2 3 4 5 Extremely useful

Expected River Flooding
Tropical Depression



Note: This forecast is based on past precipitation and forecasted rainfall.


- The Swatara Creek at Hershey is expected to crest just below the 14-foot Major flood stage on Thursday.
- At 14 feet, water begins to cover Route 39 downstream of the gage, and numerous homes adjacent to the creek are impacted.

National Weather Service - State College, PA

7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

RFC FIM for Hershey, PA area
Tropical Depression



- Swatara Creek is expected to leave it's banks in several locations in the Hershey area.
- Several roadways may be impacted by flood waters, including Boat House Road north of Hershey and East Canal Street north of Union Deposit.

National Weather Service - State College, PA


Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

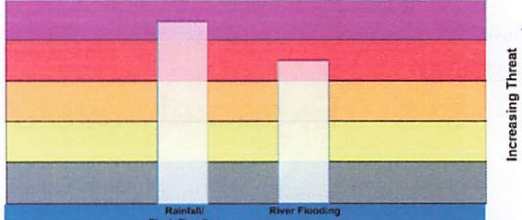
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific locations by this view, please go to <https://www.weather.gov/stp/forecast>




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

Road closures

17: Was anything in the session confusing? If yes, please explain.

No

18: What improvements could be made in the format or content of this session?

Great Presentation!

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)



- NWM FIM
- This map shows the predicted inundation area from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

• Transparency has been altered to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CatFIM near Hershey (Hummelstown area)



- CatFIM
- If Swatara Creek reaches 14 ft. (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

Label layers/colors

12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

Accuracy


13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful

Expected Storm Total Rainfall
Tropical Depression



Forecast Rainfall Accumulation
Note: There will likely be locally higher amounts

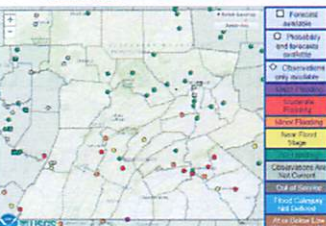
- Rainfall totals of 3-6+ inches are forecast Wednesday morning through Thursday morning for most of central and southern PA.
- A narrow corridor of locally higher amounts 6+ inches are possible across south-central PA near the I-81 corridor.
- The heaviest rainfall is expected Wednesday-early Wednesday night.
- There will be a light gradient on the northern edge of the rainfall footprint.

National Weather Service - State College, PA

5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful

River Flooding
Tropical Depression



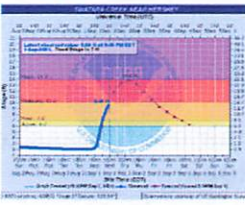
- Several foot rises on rivers and creeks expected Wednesday into Thursday, resulting in widespread minor to moderate flooding along many Lower Susquehanna Valley streams and tributaries. (Major flooding may occur in a few locations.)
- The Susquehanna River will crest later Thursday into Friday and then fall through the weekend.

National Weather Service - State College, PA

6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

Not at all useful 1 2 3 4 5 Extremely useful

Expected River Flooding
Tropical Depression



Note: This forecast is based on best precipitation and forecasted rainfall


- The Swatara Creek at Hershey is expected to crest just below the 14-foot major flood stage on Thursday.
- At 14 feet, water begins to cover Route 39 downstream of the gage, and numerous homes adjacent to the creek are impacted.

National Weather Service - State College, PA

7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

RFC FIM for Hershey, PA area
Tropical Depression



- Swatara Creek is expected to leave it's banks in several locations in the Hershey area
- Several roadways may be impacted by flood waters, including Boat House Road north of Hershey and East Canal Street north of Union Deposit.

National Weather Service - State College, PA


Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

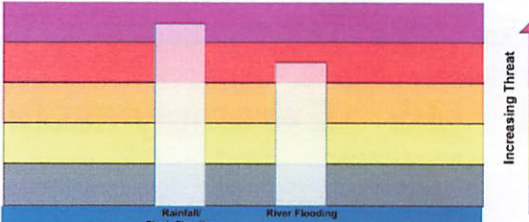
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific hazards to this area, please go to <https://www.weather.gov/styc/forecasting>




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

Dam levels & release timing / Overlay w/ road closure maps

17: Was anything in the session confusing? If yes, please explain.

n/a

18: What improvements could be made in the format or content of this session?

n/a

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)



- NWM FIM
- This map shows the predicted inundation area from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

Transparency has been allowed to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CatFIM near Hershey (Hummelstown area)



- CatFIM
- If Swatara Creek reaches 14 ft. (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

Anything highlighting what things look like on a good day vs. during the event.

12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

Clarity / Personal Impact / Lack of local Knowledge / Complex terminology


13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful

Expected Storm Total Rainfall
Tropical Depression



Forecast Rainfall Accumulation
8 7 6 5 4 3 2 1 0 0.5 1 2 3 4 5 6 7 8

Note: There will likely be locally higher amounts.

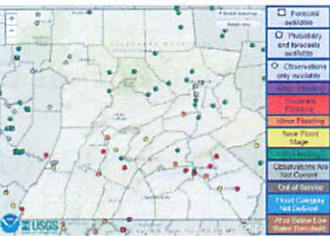
- Rainfall totals of 3-6+ inches are forecast Wednesday morning through Thursday morning for most of central and southern PA.
- A narrow corridor of locally higher amounts 6+ are possible across south-central PA near the I-51 corridor.
- The heaviest rainfall is expected Wednesday-early Wednesday night.
- There will be a light gradient on the northern edge of the rainfall footprint.

National Weather Service - State College, PA

5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful

River Flooding
Tropical Depression



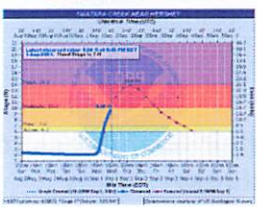
- Several foot rises on rivers and creeks expected Wednesday into Thursday, resulting in widespread minor to moderate flooding along many Lower Susquehanna Valley streams and tributaries. (Major flooding may occur in a few locations.)
- The Susquehanna River will crest later Thursday into Friday and then fall through the weekend.

National Weather Service - State College, PA

6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

Not at all useful 1 2 3 4 5 Extremely useful

Expected River Flooding
Tropical Depression



Note: This forecast is based on past precipitation and forecasted rainfall.


- The Swatara Creek at Hershey is expected to crest just below the 14-foot Major flood stage on Thursday.
- At 14 feet, water begins to cover Route 39 downstream of this gage, and numerous homes adjacent to the creek are impacted.

National Weather Service - State College, PA

7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

RFC FIM for Hershey, PA area
Tropical Depression



- Swatara Creek is expected to leave it's banks in several locations in the Hershey area.
- Several roadways may be impacted by flood waters, including Boat House Road north of Hershey and East Canal Street north of Union Deposit.

National Weather Service - State College, PA


Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

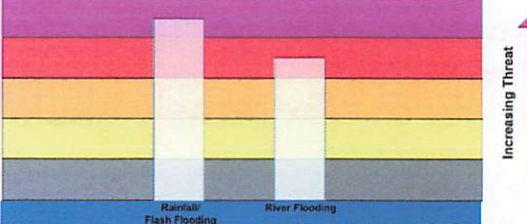
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific hazards in this area, please go to <http://www.weather.gov/denver>




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA

14: After attending today's session, how likely are you to:

Select one	Very likely	Somewhat likely	Neither likely nor unlikely	Somewhat unlikely	Unlikely
Create or revise plans to deal with extreme weather events using NWS products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Share what I learned about NWS products today with others.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek NWS information about extreme weather risks.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use NWS products and information in your decision-making	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15: Please rate your agreement with the following statements about the focus group. Please check ONE box for each statement.

Select one	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
The information was clearly presented.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt comfortable voicing my opinion.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about National Weather Service products.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I could use National Weather Service resources to judge my community's risk	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16: Beyond the questions asked today, what else would be important to know about how you gather NWS information about flood risks and your intended actions?

~~General~~ General education about terms

17: Was anything in the session confusing? If yes, please explain.

NO - everything explained clearly

18: What improvements could be made in the format or content of this session?

Nothing

Thank you for participating!

8: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

NWM FIM near Lykens (Wiconisco and Rattling creeks)
Tropical Depression



- NWM FIM
- This map shows the predicted inundation area from the NWM, showing possible inundation onto roads in the Lykens area north of Harrisburg (circled in red).

• Transparency has been altered to allow better viewing of the inundated areas.

National Weather Service - State College, PA

9: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

CatFIM near Hershey (Hummelstown area)
Tropical Depression



- CatFIM
- If Swatara Creek reaches 14 ft (Major flood), this map shows the expected flood inundation of a campground in the vicinity of Sweet Street in Hummelstown.

National Weather Service - State College, PA

10: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful

Partner (AHPS) FIM - Hershey, PA
Tropical Depression



- Partner FIM (aka AHPS FIM) was developed by a multi-agency partnership and has been publicly available for a handful of locations across central PA (including Hershey and Harrisburg) since 2011.
- This is the "gold standard" for FIM, and has the ability to show inundation by each foot of rise, and also shows expected inundation depth.

National Weather Service - State College, PA

11: What changes might you recommend for these products?

#2 - define colors #10 - contrast central line creek #5 - too busy (on the right)

12: What is the biggest barrier you face in using NWS precipitation and flood forecast products?

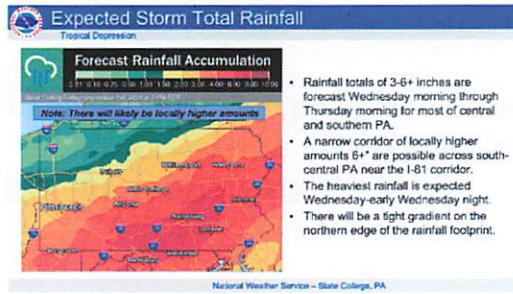
Access to a computer. Prefer mobile app.

13: Do you prefer text-based or graphical/visual NWS products in trying to understand the potential for extreme precipitation and flooding?

Text-based Graphic-based Combination of both

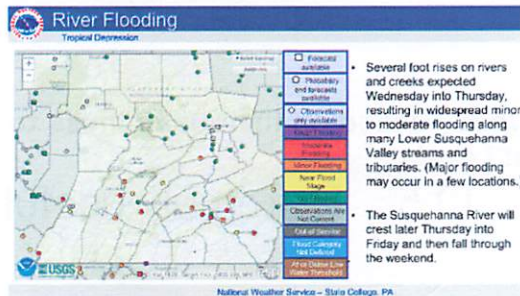
4: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Storm Total Rainfall.

Not at all useful 1 2 3 4 5 Extremely useful



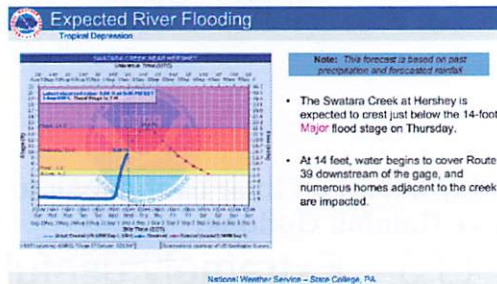
5: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. River Flooding.

Not at all useful 1 2 3 4 5 Extremely useful



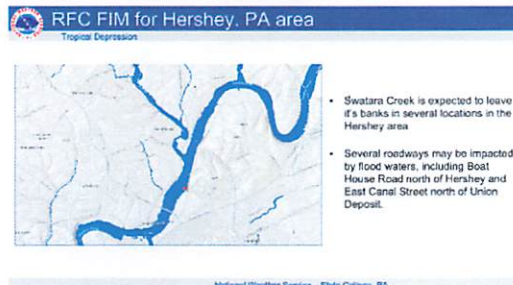
6: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Hydrograph.

Not at all useful 1 2 3 4 5 Extremely useful



7: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Flood Inundation Mapping.

Not at all useful 1 2 3 4 5 Extremely useful




Survey Questions - Post-Focus Group Session Survey (Residents)

All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org.

1: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Situation Overview.

Not at all useful 1 2 3 4 5 Extremely useful

Situation Overview
Tropical Depression



- Heavy rainfall will result in a considerable risk of **flash flooding** (rapid-onset) on Wed
- Widespread rainfall totals of 3-5" are expected across south-central PA with locally higher amounts up to 7" possible.
- Several streams and creeks are expected to experience minor to moderate **river flooding**, with a few locations possibly cresting above major flood stage late Thursday into Friday.
- River flooding is most likely south of I-80.

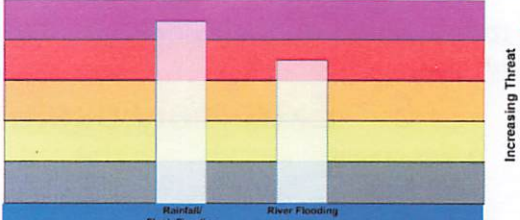
National Weather Service - State College, PA

2: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Threat Levels.

Not at all useful 1 2 3 4 5 Extremely useful

Threat Levels
Tropical Depression

For information on specific hazards in this area, please go to <http://www.weather.gov/stc/forecasting>




National Weather Service - State College, PA

3: Please rate following the weather products discussed today based on their usefulness to you in assessing your community's flood situation. Excessive Rainfall Outlook.

Not at all useful 1 2 3 4 5 Extremely useful

Excessive Rainfall Outlook
Tropical Depression



- Areas highlighted in magenta have the greatest risk for flash (rapid-onset) flooding Wednesday-Wednesday night.
- Urban areas and faster-responding small streams will be the most vulnerable to flash flooding issues.

National Weather Service - State College, PA